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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,396	07/22/2003	Ashish Agarwal	5760-12100	6815
35690	7590	01/25/2006	EXAMINER	
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C. P.O. BOX 398 AUSTIN, TX 78767-0398			SORRELL, ERON J	
		ART UNIT	PAPER NUMBER	
		2182		
DATE MAILED: 01/25/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/624,396	AGARWAL ET AL.
	Examiner Eron J. Sorrell	Art Unit 2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 07 November 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,2,4-18 and 20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,4-18 and 20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 22 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,2,4-10,12-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Midgley et al. (U.S. Patent No. 6,625,623 hereinafter "Midgley") in view of Rubin et al. (U.S. Patent No. 5,680,573 hereinafter "Rubin").

3. Referring to system claim 1, method claim 9, and computer storage medium claim 17, Midgley teaches a computing system comprising:

an application configured to initiate write transactions (see lines 22-40 of column 16);

a first storage device configured to store data corresponding to said write transactions (see lines 22-40 of column 16); and

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a replicator component (see lines 10-52 of column 19)  
configured to:

monitor said write transactions (see lines 10-52 of  
column 19); and

modify system resources in response to I/O  
characteristics of said monitored write transactions (see  
lines 10-52 of column 19, note the I/O characteristics is  
being construed as the number of write transaction, Midgley  
teaches thousands can occur).

Midgley is silent on the system comprising a memory pool  
and the replicator being configured to allocate buffers from the  
memory pool for the write transactions and modifying the size of  
the memory pool in response to the I/O characteristics.

Rubin teaches, in an analogous system, the above  
limitations (see line 60 of column 8 to line 11 of column 9).

It would have been obvious to one of ordinary skill in the  
art at the time of the applicant's invention to modify the  
system of Midgley with the above teachings of Rubin. One of  
ordinary skill in the art would have been motivated to make such  
modification in order to more efficiently manage the memory in  
the system as suggested by Rubin (see paragraph bridging columns  
2 and 3).

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4. Referring to system claim 2, method claim 10, and storage medium claim 18, Midgley the replicator is further configured to record data indicative of said characteristics (see paragraph bridging columns 7 and 8).

5. Referring to system claim 4 and method claim 12, Midgley teaches the system further comprises a log volume, and wherein the replicator is further configured to store the write transactions in the log volume (see lines 4-37 of column 17, wherein Midgley discloses a "journal file").

6. Referring to system claim 5 and method claim 13, Midgley teaches said application, first storage device, and replicator are within a first node of said system (see figure 1, item 28, and lines 23-40 of column 16), and wherein said system includes a second node with a second storage device coupled to said first node (see figure 1, item 16 and lines 54-63 of column 16) wherein said replicator component is further configured to convey said write transactions to said second node (see lines 54-63 of column 16).

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7. Referring to system claim 6, method claim 14, and storage medium claim 20, Midgley fails to teach the second node includes a pool of buffers, each of which is configured to store a write transaction received from the first node, and wherein said replicator component is further configured to modify a size of said pool of buffers in said second node in response to said characteristics, however Midgley does teach the use of buffers for transfer data in the write transaction (see line 25-52 of column 9).

Rubin teaches, in an analogous system, the above limitations (see paragraph bridging columns 8 and 9)

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Midgley with the above teachings of Rubin. One of ordinary skill in the art would have been motivated to make such modification in order to more efficiently manage the memory in the system as suggested by Rubin (see paragraph bridging columns 2 and 3).

8. Referring to system claim 7 and method claim 15, Midgley teaches, the replicator is further configured to:

provide the recorded characteristics for display (see lines 25-65 of column 19);

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provide guidelines for modifying resources of said system  
(see lines 25-65 of column 19); and  
modify said resources based upon user input (see lines 25-  
65 of column 19).

9. Referring to system claim 8 and method claim 16, Midgley teaches the replicator component is configured to access the recorded data responsive to detecting an event (see paragraph bridging columns 7 and 8, note the recorded data is accessed when the journal file is transmitted to the backup server).

*Response to Arguments*

10. Applicant's arguments filed 11/7/05 have been fully considered but they are not persuasive. The applicant argues:

- 1) "Rubin does not disclose or suggest modifying a size of a memory pool in response to said I/O characteristics (see first full paragraph of page 9 of applicant's remarks); and
- 2) Midgley fails to teach or suggest the replicator is further configured to: provide the recorded characteristics for display; provide guidelines for modifying the resources of said system, and modifying the resources based upon user input.

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11. As per argument 1, the Examiner disagrees. Rubin teaches, at lines 8-11 of column 9, that *the size memory pools can be dynamically adjusted based on demand* (emphasis added). That is to say, as the number of I/O transaction increase or decrease, the size of the memory pool can be made larger or smaller, accordingly.

12. As per argument 2, the Examiner disagrees. Midgley teaches at lines 25-65 of column 19, that the bandwidth control process may be accessed through a console. Midgley further teaches *the user employs this process to set a network consumption limit for each backup policy and restore operation* (modifying the resources based on user input) (emphasis added). *Midgley goes on to the user may specify links if multiple links are available* (provide guidelines for modifying resources) and that *the resources available, either currently or historically may also be provided to the user via the console process* (provide recorded characteristics for display) (emphasis added). These citations clearly show Midgley teaches each limitation of claim 7.

***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J. Sorrell whose telephone number is 571 272-4160. The examiner can normally be reached on Monday-Friday 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJS  
January 11, 2006

  
KIM HUYNH  
SUPERVISORY PATENT EXAMINER

1/11/06